

## CLAIMS

1. An object positioning system (100), comprising:
  - a first base station (120) for determining a location of an object (142,
  - 5 152) based upon an object-related signal;
  - an object-attachable tag (140, 150); and
  - a portable transceiver (160), comprising:
    - a receiver arrangement (161; 163) for receiving a signal from the tag (140,
    - 150);
    - 10 a signal processor (164) for converting the signal into the object-related signal;
    - and
    - a transmitter arrangement (162; 165) for sending the object-related signal to the first base station (120).
- 15 2. An object positioning system (100) as claimed in claim 1, wherein the first base station (120) comprises a receiver (122) coupled to a database (124).
3. An object positioning system (100) as claimed in claim 1, wherein the
- 20 signal processor (164) is arranged to include a transceiver identification code in the object-related signal.
4. An object positioning system (100) as claimed in claim 1, wherein the
- 25 signal processor (164) comprises a signal amplifier.
5. An object positioning system (100) as claimed in claim 1, wherein the portable transceiver (160) comprises an implementation of a signal transmission collision-avoidance mechanism.
- 30 6. An object positioning system (100) as claimed in claim 1, comprising a further portable transceiver (170); comprising:
  - a further receiver arrangement for receiving the signal;

a further signal processor for converting the signal into a further object-related signal; and

a further transmitter arrangement for sending the further object-related signal to the base station (120).

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7. An object positioning system (100) as claimed in claim 6, wherein the transmitter arrangement (162) is arranged to send the object-related signal at a first frequency, and the further transmitter arrangement is arranged to send the further object-related signal at a second frequency, the first frequency  
10 being different to the second frequency.

8. An object positioning system (100) as claimed in claim 6, wherein the transmitter arrangement (162) is arranged to send the object-related signal with a first synchronized delay upon receiving the signal, and the further  
15 transmitter arrangement is arranged to send the further object-related signal with a second synchronized delay upon receiving the signal, the first synchronized delay being different to the second synchronized delay.

9. An object positioning system (100) as claimed in claim 1, wherein:  
20 the tag (140, 150) is a passive tag responsive to an activation signal; and the portable transceiver (160) comprises a further transmitter arrangement for providing the tag (140, 150) with the activation signal.

10. An object positioning system (100) as claimed in claim 1, further  
25 comprising a second base station (126) and a third base station (128); the first base station (120), the second base station (126) and the third base station (128) being arranged to cooperate in positioning the location of the object (142, 152) by means of a triangulation measurement of the object-related signal.

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11. A base station (120) for use in an object positioning system (100) as claimed in claim 1, the base station (120) being arranged to track a location of an object responsive to an object-related signal from a portable transceiver.
- 5 12. A portable transceiver (160) for use in an object positioning system (100) as claimed in claim 1, the portable transceiver (160) comprising:  
a receiver arrangement (161) for receiving a signal from a tag;  
a signal processor (164) for converting the signal into an object-related signal;  
and  
10 a transmitter arrangement (162) for sending the object-related signal to a first base station.
13. A portable transceiver (160) as claimed in claim 12, wherein the signal processor (164) is arranged to include a transceiver identification code in the  
15 object-related signal.
14. A portable transceiver (160) as claimed in claim 12, wherein the signal processor (164) comprises a signal amplifier.
- 20 15. A portable transceiver (160) as claimed in claim 12, wherein the portable transceiver (160) comprises an implementation of a collision-avoidance mechanism.
16. A portable transceiver (160) as claimed in claim 12, wherein the  
25 portable transceiver (160) comprises a further transmitter arrangement for providing the tag with an activation signal.
17. A portable transceiver (160) as claimed in claim 12, the portable transceiver (160) being integrated in a wearable item.  
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18. A portable transceiver as claimed in claim 12, comprising a data storage for storing the position of the object.

19. A method of positioning a location of an object (300), the method comprising the steps of:  
sending a signal from a tag to a portable transceiver (320);  
5 converting the signal to an object-related signal (340);  
sending the object-related signal to a base station (360); and  
determining the position of the portable transceiver sending the object-related signal (370); and  
associating the position of the object with the determined position of the  
10 portable transceiver (380).
20. A method as claimed in claim 19, wherein the step of sending the object related signal to a base station (360) comprises the sub steps of:  
sending a first part of the object-related signal upon establishing a  
15 communication with the tag; and  
sending a second part of the object related signal upon terminating the communication with the tag.
21. A method as claimed in claim 19 or 20, wherein the step of sending a  
20 signal from a tag to a portable transceiver (320) is preceded by activating the tag with an activation signal from the portable transceiver (310).